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02/21/2008

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	JEONG-HWAN LEE, ET AL.)
) Group Art Unit: 2871
Serial No.	10/520,262)
) Examiner:
Filed:	January 5, 2005) TON, MINH TOAN T
)
For:	FLAT PANEL DISPLAY DEVICE) Confirmation No: 5093

AMENDMENT

Sir:

This Amendment is submitted in response to the Final Office Action dated December 17, 2007. Please amend the Application as follows:

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (Currently Amended) A flat panel display device, comprising:
an image display part for displaying an image by varying a voltage applied to electrodes oppositely formed on inner surfaces of a pair of transparent facing substrate respectively to thereby turn on or off each pixel; and
a transparent protecting part disposed on an outer surface of the image display part perceived by user's eye for protecting a surface of the image display part from an external shock or foreign matters, the transparent protecting part having a hardness of at least 2H so as to resist the external shock, and having a corrosion resistance so as to be cleaned by water or cleanser.
2. (Original) The flat panel display device of claim 1, wherein the image display part includes a liquid crystal display device including liquid crystal interposed between the pair of transparent facing substrate.
3. – 4 (Cancelled)
5. (Previously Presented) The flat panel display device of claim 10, wherein the protecting part includes a protecting sheet adhered to the upper polarizing plate.
6. (Previously Presented) The flat panel display device of claim 10, wherein the protecting part includes a protecting sheet laminated on the upper polarizing plate.
7. (Previously Presented) The flat panel display device of claim 10, wherein the upper polarizing plate and the lower polarizing plate include a phase compensating member for enhancing viewing angle.

8. (Previously Presented) The flat panel display device of claim 7, wherein the upper polarizing plate and the lower polarizing plate include a light compensation polarizing member for preventing light leakage at an edge portion of the liquid crystal display.

9. (Currently Amended) A flat panel display device, comprising:
an image display part for displaying an image by varying a voltage applied to electrodes oppositely formed on inner surfaces of a pair of transparent facing substrate respectively to thereby turn on and off each pixel, the image display part comprising:
a liquid crystal display panel for displaying images by using a polarized light; and
a polarizing plate including:
a polarizing film, and
a protecting layer laminated to the polarizing film and protecting the polarizing film, and disposed on at least one surface of the liquid crystal display panel for polarizing light emitted from the liquid crystal display panel; and
a transparent protecting part disposed on the polarizing plate, the transparent protecting part having a hardness of at least 2H so as to resist the external shock, and having a corrosion resistance so as to be cleaned by water or cleanser;
wherein the polarizing plate comprises a glare treatment and the protecting part comprises an anti-glare treatment.

10. (Previously Presented) The flat panel display device of claim 2, wherein the liquid crystal display device includes a) a lower polarizing plate for polarizing light, b) a liquid crystal display panel for displaying an image by using a polarized light emitted from the lower polarizing plate and the liquid crystal, and c) an upper polarizing plate disposed on an upper surface of the liquid crystal display panel for polarizing light emitted from the liquid crystal display panel.

11. (Previously Presented) The flat panel display device of claim 10, wherein a glare treatment is carried out on the upper polarizing plate, and an anti-glare treatment is carried out on the protecting sheet.

REMARKS

In response to the Final Office action dated December 17, 2007, Applicants respectfully request reconsideration based on the above claim amendments and the following remarks.

Applicants respectfully submit that the claims as presented are in condition for allowance.

Claims 1, 2 and 5-11 are pending in the present Application. No claims have been cancelled or added, leaving Claims 1, 2 and 5-11 for consideration upon entry of the present amendment.

Claims 1 and 9 are now amended. Support for the amendment to Claims 1 and 9 can be found in the specification as originally filed at least on page 9, ll. 17-19. No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. §103

The Examiner has rejected Claims 1, 2 and 5-11 under 35 U.S.C. §103(a) as being unpatentable over Kitagawa et al., U.S. Patent Publication No. 2002/0054262 (hereinafter “Kitagawa”) in view of Ahmed, U.S. Patent No. 5,385,758 Hereinafter (“Ahmed”). (Office Action 12/17/2007, page 2) Applicants respectfully traverse the rejections.

Amended Independent Claim 1 is directed to a flat panel display device, comprising *inter alia* a transparent protecting part disposed on an outer surface of the image display part perceived by user's eye for protecting a surface of the image display part from an external shock or foreign matters, the transparent protecting part having a hardness of at least 2H so as to resist the external shock, and having a corrosion resistance so as to be cleaned by water or cleanser.

Amended Independent Claim 9 is directed to a flat panel display device comprising *inter alia* a polarizing plate including: a polarizing film, and a protecting layer laminated to the polarizing film and protecting the polarizing film, and disposed on at least one surface of the liquid crystal display panel for polarizing light emitted from the liquid crystal display panel; and a transparent protecting part disposed on the polarizing plate, the transparent protecting part having a hardness of at least 2H so as to resist the external shock, and having a corrosion resistance so as to be cleaned by water or cleanser.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are

disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Kitagawa teaches a wide viewing angle polarizing plate capable of forming a liquid crystal display. (Abstract) Kitagawa teaches that a transparent protective layer may be used and that the transparent protective layer is excellent in transparency, mechanical strength, thermal stability, moisture shielding property, isotropic property, and others. (Paragraph [0022]) However, Kitagawa does not teach all elements of the presently claimed invention.

The instant specification teaches that:

The surface of the television set comes most frequently into contact with users inevitably, so that the liquid crystal display panel of the television set is easily damaged by an external shock and foreign matters are easily adhered to the surface of the liquid crystal display panel. A frequently repeated external shock damages the upper polarizing plate of the liquid crystal display panel, so that the image is distorted. In addition, the foreign matters adhered to the surface of the liquid crystal display panel also make the image distorted. Furthermore, when users familiar with a cathode-ray tube (CRT) of the television set clean the surface of the liquid crystal display panel up, the upper polarizing plate can also be damaged by cleansers, so that the image can be distorted.

(Page 3, ll. 2-11)

[A] protecting sheet is installed to the LCD device of the television set to thereby absorb the exterior shock. Furthermore, the foreign matters stained on the screen can be easily removed by using warm water or a detergent. Cleaning the screen of the television set without the protecting sheet by using the warm water of the detergent causes damage to the first polarizing plate which results in image distortion. The protecting sheet *inter alia* strongly resists the external shock to thereby be able to protect the polarizing plate without damage.

(Page 9, lines 6-13, 15-16)

Thus the present specification teaches the importance of having a protecting sheet that is both resistant to external shock and that can easily withstand cleaning with cleaning agents such as warm water or detergent i.e. is resistant to corrosion.

While Kitagawa teaches a transparent protecting part, Kitagawa does not teach a transparent protecting part having a hardness of at least 2H so as to resist the external shock, and having a corrosion resistance so as to be cleaned by water or cleanser. In fact, Kitagawa is silent with regard to a need for protecting the polarizing film from external shock and is also silent with regard to the corrosion resistance of the protecting part.

For at least these reasons, Kitagawa does not teach or even suggest all aspects of the presently claimed invention and therefore there would be no motivation to modify the reference.

In making the rejection, the Examiner stated that Ahmed teaches a protecting part having a hardness of at least 2H for achieving advantages such as resisting the external shock and corrosion and therefore it would have been obvious to employ a protecting part having a hardness of at least 2H for achieving advantages such as resisting the external shock and corrosion. (OA 12/17/2007, page 2)

As discussed previously, the present specification teaches that the protective screen may be used to protect the upper polarizing plate of a television screen. Consequently, in order to ensure that light, and images transmitted through the television screen are observed by the viewer, the protective coating/sheet would have to be optically transparent. As such, the instant specification teaches that the protecting sheet is formed to be transparent without polarizing characteristic, so that the light passing through the first polarizing plate can transmit thereto without distortion. (Page 9, ll. 17-19)

Ahmed teaches a process for forming an autodeposition coating on a metallic substrate by applying an autodeposition composition from a motile source thereof such as by spraying or by treating the surface with a continuous stream of the autodepositing composition. (Abstract)
Ahmed further teaches the following with regard to the coating composition:

Coating compositions which form autodeposited coatings of the type that can be employed *inter alia* comprise resin-containing acidic aqueous compositions. Such compositions attack and dissolve metal ions from a metallic surface in an amount sufficient to directly or indirectly cause

resin particles in the region of the metallic surface to deposit therein in a continuous fashion.

(Col. 2, ll. 29-36)

Deposition of the autodepositing composition depends on the removal of metallic ions from the metallic surface and the deposit of resin particles thereon.

(Col 4, ll. 4-7)

Thus, Ahmed teaches that deposition of the resin on the metallic surface requires the dissolution of metal ions. Therefore, Applicants assert that one of skill in the art would not be motivated to take an acidic coating resin composition designed for coating a metallic surface in order to apply it to the surface of a polarizing sheet/plate. The instant specification teaches that the polarizing plate comprises a polyvinyl alcohol layer of high polymer polarizing material as a base layer and a lower support layer including triacetyl cellulose adhered to the upper and lower surfaces of the polyvinyl alcohol layer. (Page 10, ll. 12-16) Thus, one of skill in the art would expect that the deposition of the acidic compositions of Ahmed on a polarizing sheet/film would act in a similar manner on the polymer comprising the polarizing film. Since the purpose of the protective part/sheet is to protect the polarizing sheet/plate from corrosion and damage, one of skill in the art would not be motivated to use the resins taught by Ahmed as a protective coating, since Ahmed discloses that the compositions are acidic and that the chemical action of the coating composition facilitates the deposition of the resin. The deposition of such a coating would therefore defeat the purpose of protective layer as the acidic composition would attack and act to dissolve the polymer of the film. Further, one of skill in the art would not be motivated to take a coating material that is applied to a metallic surface and apply it to a polyvinyl alcohol-based surface. More specifically, one of ordinary skill in the art would not be motivated to take a film that is applied to an opaque metallic surface and apply it to a surface that requires the transmission of light to a viewer.

Therefore, for at least these reasons, there would be no motivation to combine Ahmed with Kitagawa.

Ahmed teaches a latex resin with a pencil hardness of 5H in Example 1 and a pencil hardness of 2H in Example 2. Tables 1 and 2 shows that the compositions of Examples 1 and 2,

each comprise 1.88g of carbon black, or ~2.5 wt% carbon black based upon the total weight of the specified active ingredients. One of skill in the art knows that carbon black is used as a pigment, specifically, to cause the color of a composition to turn black. Further, it is also known that the addition of carbon black to a resin composition, and the subsequent color change, results in the loss of optical transparency due to the presence of carbon black. Even further, it is also known that carbon black is often used in polymeric resins as a reinforcing filler which can contribute to the overall hardness of the resin. Thus, the inclusion of carbon black in the compositions of Ahmed may contribute to the level of hardness observed in the resin compositions provided in both Tables 1 and 2. Thus Ahmed discloses a resin coating composition comprising carbon black that is not optically transparent, and which possesses a hardness that one of skill in the art might easily surmise is partly attributable to carbon black.

For at least these reasons, one of skill in the art would not be motivated to use the coating composition of Ahmed as a protective coating for the device of Kitagawa since Ahmed does not teach transparent protective coatings having a hardness of 2H. Further, if the carbon black were to be removed from the resin composition in order to improve the transparency of the resin, there would be no expectation that the same degree of hardness would be achieved in the coating composition.

Ahmed does not teach or suggest a transparent protecting part having a hardness of 2H. For at least this reason, the combination of Kitagawa and Ahmed does not teach or suggest each and every element of the invention. Further, as Ahmed does not make up for the deficiencies of Kitagawa, there would be no motivation to combine the references.

Applicants therefore believe that the Examiner has not made a *prima facie* case of obviousness over Kitagawa in view of Ahmed. Applicants respectfully request a withdrawal of the rejection and an allowance of the claims.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the objection(s) and rejection(s) and allowance of the case are respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,

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Date: February 19, 2008